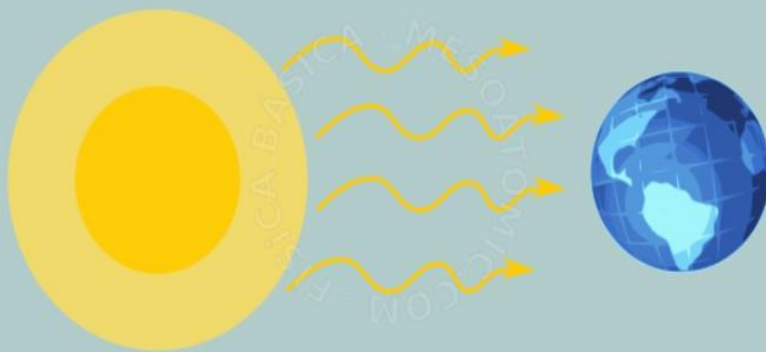




Informe Solarimétrico I Semestre 2019

Oficina de Servicios Climatológicos



WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JANUARY

Year: 2019

Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15' S
Longitude	70°19' W	68°54' W	70°26' W	70°46' W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	23.14	.	28.08	.
2	17.85	.	25.80	.
3	24.64	.	28.09	.
4	22.70	.	27.48	.
5	25.49	.	30.41	.
6	21.89	.	24.43	.
7	13.39	.	19.49	.
8	23.62	.	30.35	.
9	20.75	.	30.34	.
10	24.51	.	29.85	.
11	25.61	.	29.63	.
12	25.20	.	29.17	.
13	26.62	.	30.27	.
14	22.74	.	27.61	.
15	19.26	.	29.85	.
16	22.31	.	30.15	.
17	14.14	.	30.21	.
18	17.55	.	27.79	.
19	24.16	.	30.17	.
20	25.56	.	29.85	.
21	24.13	.	29.30	.
22	23.35	.	28.85	.
23	21.08	.	29.93	.
24	25.42	.	28.69	.
25	24.59	.	28.32	.
26	23.92	.	17.57	.
27	22.75	.	28.83	.
28	19.27	.	28.18	.
29	12.97	.	25.80	.
30	13.12	.	26.88	.
31	24.62	.	26.26	.
TT Monthly Totals	676.34	.	867.65	.
 Daily Means	21.82	.	27.99	.
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JANUARY

Year: 2019

Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station				
Date	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
1	32.74	25.13	14.99	26.37
2	29.53	25.70	20.46	15.03
3	32.91	15.67	24.44	19.20
4	32.28	22.24	24.47	24.00
5	30.50	27.29	25.29	22.42
6	28.45	16.02	25.30	29.89
7	26.24	11.13	19.22	23.60
8	27.86	20.58	16.45	31.96
9	11.41	32.25	24.04	22.36
10	31.34	35.13	24.05	12.18
11	31.03	13.72	22.77	31.62
12	29.88	11.32	24.52	26.49
13	27.86	34.29	26.55	29.30
14	25.45	30.00	26.56	14.64
15	31.10	17.64	17.63	22.22
16	30.26	28.63	23.07	24.96
17	31.07	31.56	24.05	25.40
18	30.95	31.49	25.27	22.69
19	30.65	21.43	25.27	20.67
20	26.63	11.72	25.27	20.24
21	30.19	25.24	17.78	18.98
22	28.16	17.96	23.29	27.64
23	30.31	33.91	24.38	19.06
24	29.65	25.20	24.39	30.44
25	27.16	18.34	13.75	29.95
26	29.97	33.68	23.27	18.63
27	30.38	23.13	23.27	18.34
28	30.39	15.84	22.42	27.34
29	29.36	19.61	22.42	27.31
30	29.16	29.48	12.97	25.23
31	29.88	26.98	15.46	13.14
TT Monthly Totals	902.75	732.32	683.06	721.28
 Daily Means	29.12	23.62	22.03	23.27
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: FEBRUARY

Year: 2019

Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15'S
Longitude	70°19'W	68°54' W	70°26' W	70°46'W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	25.56	.	27.83	.
2	25.24	.	28.39	.
3	25.32	.	16.65	.
4	22.83	.	17.34	.
5	23.75	.	28.50	.
6	21.61	.	26.58	.
7	20.49	.	22.34	.
8	14.15	.	14.36	.
9	24.16	.	17.21	.
10	24.63	.	26.47	.
11	21.31	.	25.14	.
12	18.27	.	19.53	.
13	20.02	.	27.57	.
14	22.34	.	25.50	.
15	22.50	.	23.03	.
16	25.32	.	28.80	.
17	25.43	.	27.95	.
18	18.54	.	28.15	.
19	24.20	.	27.79	.
20	24.68	.	27.89	.
21	24.28	.	25.19	.
22	24.04	.	27.04	.
23	24.02	.	22.24	.
24	22.68	.	26.21	.
25	22.62	.	27.51	.
26	23.49	.	26.84	.
27	23.80	.	26.96	.
28	23.01	.	27.12	.
29				
30				
31				
TT Monthly Totals	638.31	.	696.14	.
 Daily Means	22.80	.	24.86	.
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: FEBRUARY

Year: 2019

Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station				
Date	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
1	29.15	30.07	16.25	24.47
2	28.12	31.20	22.92	15.74
3	28.62	30.68	22.92	26.56
4	28.74	29.52	22.56	27.61
5	28.78	23.07	22.57	24.10
6	28.60	28.39	20.23	15.32
7	27.36	29.66	22.73	8.23
8	27.44	30.23	22.73	16.95
9	27.58	15.55	15.97	15.07
10	22.64	16.75	17.39	19.37
11	15.78	31.07	21.94	6.94
12	26.51	30.93	22.26	18.71
13	28.15	29.30	17.31	21.37
14	27.81	20.71	18.46	24.17
15	26.44	25.51	20.76	14.63
16	19.10	29.03	21.48	19.87
17	26.02	20.98	11.83	7.69
18	26.14	16.16	21.10	19.50
19	25.73	27.63	9.96	17.20
20	25.42	6.61	17.19	9.01
21	25.05	6.63	17.10	17.74
22	25.40	23.85	19.39	11.08
23	25.58	13.55	18.37	9.10
24	25.90	23.99	13.13	17.26
25	25.20	27.57	19.80	11.28
26	25.04	19.17	17.32	21.85
27	24.85	12.71	15.60	13.87
28	24.54	11.79	7.45	10.91
29				
30				
31				
TT Monthly Totals	725.70	642.28	516.72	465.61
 Daily Means	25.92	22.94	18.45	16.63
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MARCH

Year: 2019

Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15'S
Longitude	70°19'W	68°54' W	70°26' W	70°46'W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	23.12	.	26.97	.
2	23.34	.	24.65	.
3	23.16	.	26.61	.
4	21.27	.	26.35	.
5	22.96	.	26.68	.
6	22.45	.	26.06	.
7	22.45	.	22.40	.
8	22.29	.	17.63	.
9	21.36	.	26.48	.
10	20.17	.	24.86	.
11	18.93	.	21.20	.
12	21.38	.	26.22	.
13	17.11	.	25.64	.
14	18.88	.	25.61	.
15	17.54	.	22.49	.
16	18.91	.	25.14	.
17	21.33	.	25.83	.
18	21.21	.	23.94	.
19	19.17	.	25.38	.
20	19.43	.	25.01	.
21	21.04	.	24.84	.
22	20.71	.	24.80	.
23	20.42	.	24.52	.
24	19.12	.	24.07	.
25	19.37	.	23.49	.
26	19.67	.	24.21	.
27	19.37	.	24.04	.
28	18.45	.	23.72	.
29	19.16	.	19.86	.
30	19.24	.	22.03	.
31	19.05	.	22.95	.
TT Monthly Totals	632.04	.	753.66	.
 Daily Means	20.39	.	24.31	.
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MARCH

Year: 2019

Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
Date				
1	24.48	8.17	13.65	6.79
2	23.85	11.05	9.08	7.85
3	22.64	10.87	13.33	21.05
4	22.72	15.32	9.13	11.84
5	23.63	9.20	3.48	19.50
6	23.48	4.52	7.19	11.82
7	23.35	20.23	17.36	17.48
8	22.76	26.23	15.26	8.23
9	22.26	25.52	15.99	16.41
10	22.54	24.85	16.73	16.78
11	22.54	15.80	14.94	17.14
12	22.41	8.97	.	14.52
13	18.37	13.99	.	5.09
14	21.64	21.46	.	15.36
15	21.69	22.15	.	2.37
16	20.70	22.51	.	3.74
17	21.77	13.14	.	4.77
18	17.29	13.00	.	13.89
19	21.51	19.71	.	5.83
20	20.00	21.53	4.08	9.29
21	20.02	6.84	6.06	5.16
22	19.77	10.32	4.09	14.63
23	19.47	20.78	12.97	12.23
24	19.47	20.85	13.96	12.24
25	19.10	11.43	12.59	14.19
26	18.79	21.90	12.63	1.31
27	18.74	21.25	13.27	7.16
28	17.49	10.55	12.99	9.94
29	18.24	3.31	5.38	10.16
30	5.97	20.44	12.78	5.02
31	17.68	12.86	11.92	9.44
TT Monthly Totals	634.39	488.75	.	331.23
 Daily Means	20.46	15.77	.	10.68
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: APRIL

Year: 2019

Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15'S
Longitude	70°19'W	68°54' W	70°26' W	70°46'W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	14.23	.	22.12	.
2	16.60	.	22.78	.
3	14.67	.	16.51	.
4	17.09	.	21.97	.
5	18.38	.	21.89	.
6	16.49	.	11.22	.
7	17.92	.	22.18	.
8	17.99	.	22.10	.
9	13.05	.	19.66	.
10	12.48	.	18.47	.
11	17.75	.	21.43	.
12	17.24	.	21.42	.
13	17.09	.	21.33	.
14	15.86	.	21.06	.
15	16.83	.	20.97	.
16	11.53	.	18.86	.
17	14.97	.	18.27	.
18	15.65	.	20.26	.
19	13.76	.	20.66	.
20	10.95	.	20.23	.
21	15.83	.	20.21	.
22	13.13	.	19.91	.
23	14.22	.	19.30	.
24	10.97	.	15.00	.
25	14.66	.	18.97	.
26	14.87	.	15.31	.
27	11.80	.	9.78	.
28	9.33	.	14.78	.
29	11.85	.	17.65	.
30	13.35	.	17.36	.
31				
TT Monthly Totals	440.54	.	571.67	.
 Daily Means	14.68	.	19.06	.
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: APRIL

Year: 2019

Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station				
Date	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
1	18.81	5.55	3.05	2.64
2	18.81	11.76	9.29	8.09
3	18.30	2.79	8.09	12.13
4	15.19	14.58	8.96	11.57
5	18.56	18.69	4.67	4.53
6	18.43	8.40	5.82	10.97
7	18.41	14.39	3.31	9.37
8	17.95	7.14	9.30	2.62
9	11.98	5.71	9.46	6.81
10	17.28	4.31	10.91	5.96
11	17.29	6.76	9.52	10.75
12	13.20	2.47	1.75	1.80
13	3.49	6.16	1.77	7.92
14	10.68	9.31	5.51	7.86
15	16.84	16.44	2.96	5.49
16	16.66	6.71	1.70	6.86
17	16.25	9.41	9.48	8.50
18	9.57	9.79	7.74	5.58
19	10.40	5.81	7.50	7.00
20	7.65	6.79	6.39	8.35
21	15.42	4.69	5.74	7.17
22	15.10	4.24	7.23	2.78
23	11.29	13.96	7.52	5.73
24	4.16	14.60	8.06	7.58
25	11.02	3.57	7.82	7.36
26	14.12	9.24	3.77	7.26
27	13.83	3.59	1.52	3.69
28	13.65	7.18	1.93	2.39
29	11.33	10.27	4.90	6.52
30	14.17	6.71	3.08	6.01
31				
TT Monthly Totals	419.84	251.03	178.73	201.31
 Daily Means	13.99	8.37	5.96	6.71
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MAY

Year: 2019

Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15' S
Longitude	70°19' W	68°54' W	70°26' W	70°46' W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	14.77	.	19.11	.
2	14.56	.	18.76	.
3	13.18	.	15.40	.
4	14.08	.	18.01	.
5	14.12	.	15.40	.
6	14.09	.	15.95	.
7	13.59	.	12.25	.
8	6.34	.	4.29	.
9	5.76	.	12.58	.
10	4.78	.	6.54	.
11	12.25	.	18.10	.
12	12.52	.	17.80	.
13	13.20	.	17.40	.
14	13.21	.	15.20	.
15	8.19	.	16.36	.
16	11.56	.	5.20	.
17	9.34	.	14.30	.
18	8.44	.	16.83	.
19	10.18	.	7.06	.
20	9.03	.	14.92	.
21	6.18	.	16.19	.
22	9.75	.	14.92	.
23	10.73	.	8.63	.
24	8.65	.	.	.
25	6.61	.	.	.
26	8.31	.	.	.
27	10.37	.	.	.
28	10.68	.	.	.
29	9.06	.	.	.
30	11.36	.	.	.
31	8.83	.	.	.
TT Monthly Totals	323.68	.	.	.
Daily Means	10.44	.	.	.
SS Monthly Totals				
Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MAY

Year: 2019

Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station				
Date	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
1	13.48	0.90	.	4.81
2	8.14	7.77	.	6.70
3	8.19	7.31	.	6.04
4	11.02	7.51	.	4.32
5	8.54	5.65	.	4.22
6	6.51	9.82	.	1.69
7	11.64	6.55	.	4.60
8	7.30	2.24	.	5.00
9	8.25	3.39	.	5.95
10	11.81	7.13	.	2.96
11	12.03	3.53	.	3.33
12	12.04	5.44	.	3.46
13	12.17	11.04	.	5.01
14	11.98	10.74	.	5.20
15	11.68	7.71	.	2.95
16	7.79	2.83	.	2.30
17	7.71	3.70	.	1.85
18	11.40	5.11	.	3.41
19	6.28	5.96	.	4.13
20	8.34	11.55	.	3.05
21	11.46	10.27	.	2.13
22	11.30	3.47	.	0.57
23	11.22	2.21	.	1.15
24	5.18	4.15	.	4.12
25	6.23	2.99	.	3.87
26	4.65	3.89	.	3.04
27	10.12	7.13	.	3.10
28	9.31	10.20	.	3.02
29	0.72	3.16	.	3.58
30	7.87	3.88	.	3.84
31	4.41	3.35	.	1.37
TT Monthly Totals	278.77	180.60	.	110.74
 Daily Means	8.99	5.83	.	3.57
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JUNE

Year: 2019

Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15'S
Longitude	70°19'W	68°54' W	70°26' W	70°46'W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
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28
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30
31
TT Monthly Totals
 Daily Means
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JUNE

Year: 2019

Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station				
Date	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
1	6.28	4.04	.	0.64
2	9.54	6.56	.	1.51
3	9.85	1.67	.	1.31
4	5.92	0.93	.	1.23
5	8.36	2.84	.	3.01
6	5.39	4.50	.	2.02
7	10.33	1.25	.	1.31
8	10.55	2.01	.	0.75
9	10.19	2.13	.	1.72
10	6.74	8.03	.	2.48
11	7.58	9.87	.	1.81
12	6.81	2.51	.	3.21
13	2.48	5.38	.	2.12
14	7.88	7.19	.	1.07
15	9.91	9.79	.	0.90
16	10.30	6.48	.	1.19
17	4.52	9.58	.	0.30
18	10.60	2.83	.	0.83
19	7.32	5.73	.	2.04
20	8.02	6.86	.	2.00
21	7.30	4.79	.	1.82
22	8.50	2.24	.	2.66
23	4.25	5.14	.	0.52
24	0.91	7.78	.	1.93
25	9.56	2.23	.	2.54
26	5.79	6.05	.	2.81
27	2.27	1.40	.	3.03
28	1.57	10.29	.	2.12
29	4.62	8.72	.	2.48
30	6.65	8.08	.	0.60
31				
TT Monthly Totals	210.00	156.88	.	51.94
 Daily Means	7.00	5.23	.	1.73
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JANUARY		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	8.5	11.3	.	8.5	
2	4.6	7.6	.	6.9	
3	7.7	12.0	.	8.9	
4	7.5	10.9	.	8.5	
5	9.1	12.2	.	11.8	
6	7.1	10.0	.	7.3	
7	0.1	7.5	.	5.5	
8	8.3	9.9	.	12.1	
9	6.4	11.9	.	11.3	
10	8.6	12.2	.	11.0	
11	9.8	12.0	.	11.7	
12	10.4	12.0	.	10.4	
13	10.6	11.7	.	11.5	
14	5.4	12.4	.	10.3	
15	4.4	11.2	.	10.5	
16	7.1	11.8	.	9.8	
17	2.0	11.8	.	10.6	
18	2.0	9.8	.	8.5	
19	9.0	12.0	.	11.7	
20	10.6	12.3	.	10.7	
21	8.9	12.2	.	10.2	
22	7.2	11.5	.	10.2	
23	7.9	12.3	.	11.8	
24	11.9	12.3	.	11.1	
25	10.4	11.3	.	9.3	
26	8.6	11.5	.	9.2	
27	8.5	10.8	.	11.7	
28	3.6	9.7	.	10.6	
29	1.0	2.1	.	7.1	
30	1.0	2.7	.	8.8	
31	1.0	2.7	.	8.8	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	209.2	321.6	.	306.3	
Daily Means	6.7	10.4	.	9.9	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL STOKES	CAMPBELL STOKES	CAMPBELL STOKES	CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JANUARY		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	27°15'S	27°10' S	29°57' S	33°23' S	
Longitude	70°46'W	109°26' W	71°22' W	70°47' W	
Elevation	204 m	47 m	25 m	474 m	
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL	
Date					
1	9.0	10.4	10.8	12.7	
2	7.5	10.3	11.5	12.5	
3	7.7	7.6	12.0	12.5	
4	9.3	8.6	5.6	12.7	
5	10.7	7.5	7.3	12.5	
6	10.4	11.9	9.8	10.4	
7	4.3	8.2	9.2	12.0	
8	10.4	4.1	12.8	10.9	
9	9.2	5.7	13.0	2.3	
10	12.1	11.1	12.6	13.5	
11	10.3	10.9	7.9	13.5	
12	12.6	7.3	12.0	12.6	
13	8.7	6.7	12.9	11.5	
14	10.7	5.3	12.5	10.2	
15	7.2	8.2	12.2	13.4	
16	4.1	12.3	5.5	12.9	
17	7.2	9.8	12.1	13.3	
18	0.8	8.1	8.9	12.3	
19	8.3	5.7	4.2	13.3	
20	8.3	12.5	7.6	11.7	
21	4.8	11.2	0.6	13.2	
22	2.2	9.2	1.3	12.8	
23	9.9	6.5	7.1	13.1	
24	9.1	12.1	5.6	13.1	
25	9.2	12.3	7.1	13.0	
26	6.4	7.4	6.1	13.0	
27	11.6	9.2	6.7	13.0	
28	12.3	7.3	7.0	13.0	
29	9.4	10.2	8.6	13.0	
30	11.9	9.5	12.5	13.0	
31	11.9	9.5	12.5	13.0	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	267.5	276.6	275.5	379.9	
 Daily Means	8.6	8.9	8.9	12.3	
Types of Instruments	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JANUARY		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	33°27' S	33°37' S	33°39' S	34°58' S	
Longitude	70°42' W	78°50' W	71°36' W	71°12' W	
Elevation	520 m	30 m	74 m	225 m	
Station					
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	
1	11.9	0.2	13.2	13.4	
2	12.0	6.4	13.0	13.4	
3	11.7	9.1	13.7	13.4	
4	11.8	10.5	2.9	13.5	
5	11.6	8.0	9.5	13.2	
6	8.7	1.3	10.1	12.0	
7	11.1	4.7	8.9	8.8	
8	9.6	2.0	10.4	0.1	
9	0.9	5.8	5.6	2.7	
10	11.5	4.4	13.0	13.2	
11	11.5	7.7	12.4	13.3	
12	11.2	1.6	9.8	9.3	
13	9.7	10.2	8.9	11.8	
14	9.0	9.2	8.4	10.5	
15	11.4	9.7	10.7	13.3	
16	11.3	6.7	11.9	10.2	
17	11.4	7.5	12.5	12.4	
18	11.3	10.2	10.6	13.2	
19	11.4	9.1	4.4	13.1	
20	9.9	4.0	2.6	12.5	
21	11.4	4.6	10.1	13.2	
22	10.3	5.4	9.0	11.2	
23	11.3	8.3	8.0	12.1	
24	11.2	7.7	7.5	13.1	
25	10.5	7.8	7.7	13.0	
26	11.1	5.8	12.6	13.3	
27	10.1	11.1	12.5	13.1	
28	11.2	6.4	12.3	13.0	
29	11.1	4.5	8.2	13.1	
30	11.3	1.7	1.3	13.0	
31	11.3	1.7	1.3	13.0	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	329.7	193.3	283.0	364.4	
 Daily Means	10.6	6.2	9.1	11.8	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JANUARY		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	36°36' S	36°46' S	38°45' S	39°41' S	
Longitude	72°26' W	73°03' W	72°38' W	73°04' W	
Elevation	124 m	12 m	114 m	19 m	
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA	
Date					
1	.	12.8	.	12.3	
2	.	13.3	.	10.8	
3	.	13.1	.	9.2	
4	.	12.9	.	12.7	
5	.	0.1	.	12.7	
6	.	12.7	.	8.0	
7	.	6.1	.	1.8	
8	.	0.0	.	1.0	
9	.	8.5	.	9.4	
10	.	12.9	.	12.8	
11	.	11.8	.	7.7	
12	.	3.5	.	0.8	
13	.	9.2	.	10.8	
14	.	12.3	.	12.5	
15	.	11.8	.	7.7	
16	.	10.8	.	7.9	
17	.	12.6	.	12.7	
18	.	12.2	.	12.6	
19	.	6.1	.	12.2	
20	.	10.1	.	3.2	
21	.	12.5	.	10.4	
22	.	12.5	.	11.8	
23	.	12.3	.	12.2	
24	.	12.3	.	11.0	
25	.	12.3	.	5.4	
26	.	12.6	.	12.6	
27	.	12.6	.	12.6	
28	.	12.3	.	12.0	
29	.	12.5	.	1.3	
30	.	12.5	.	14.5	
31	.	12.5	.	14.5	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	329.7	.	297.1	
 Daily Means	.	10.6	.	9.6	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JANUARY

Year: 2019

Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	8.2	3.9	14.2	
2	9.6	7.3	2.8	
3	2.0	9.0	3.7	
4	6.6	8.0	9.8	
5	9.9	11.7	4.1	
6	4.5	8.8	11.9	
7	1.0	1.3	9.3	
8	8.0	4.0	15.3	
9	12.8	10.0	9.3	
10	13.5	8.9	1.8	
11	1.4	0.2	12.9	
12	0.9	11.1	8.1	
13	12.8	11.8	6.6	
14	10.0	6.6	4.2	
15	2.4	4.1	9.2	
16	7.1	11.4	8.4	
17	10.7	9.2	7.7	
18	12.5	11.6	6.3	
19	8.7	11.8	5.7	
20	2.2	9.5	2.7	
21	10.5	4.9	6.3	
22	8.4	10.2	10.6	
23	13.3	10.7	3.5	
24	9.4	8.3	13.9	
25	3.4	4.9	12.8	
26	13.0	11.0	4.7	
27	7.4	1.5	7.5	
28	4.4	10.4	8.1	
29	7.3	6.3	8.5	
30	8.7	6.8	9.7	
31	8.7	6.8	9.7	
TT Monthly Totals				
Daily Means				
SS Monthly Totals	239.3	242.0	249.3	
Daily Means	7.7	7.8	8.0	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL STOKES	CAMPBELL STOKES	CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: FEBRUARY		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19' W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	9.9	12.1	.	11.0	
2	9.0	9.7	.	11.4	
3	9.3	9.0	.	0.1	
4	7.2	11.2	.	8.0	
5	8.0	11.5	.	11.4	
6	6.0	10.2	.	9.7	
7	6.0	9.2	.	5.1	
8	2.1	4.5	.	0.0	
9	8.0	5.6	.	1.4	
10	9.9	11.2	.	8.8	
11	7.0	9.7	.	7.3	
12	5.7	11.3	.	3.2	
13	4.8	11.9	.	8.7	
14	6.4	6.9	.	7.0	
15	7.4	0.8	.	5.7	
16	11.2	11.8	.	11.1	
17	10.7	11.8	.	10.5	
18	6.4	8.6	.	10.9	
19	10.6	12.0	.	11.0	
20	11.1	12.0	.	11.1	
21	11.3	12.0	.	10.5	
22	11.0	11.9	.	10.5	
23	11.4	11.8	.	10.3	
24	8.4	11.9	.	10.4	
25	9.6	11.9	.	11.1	
26	11.3	11.8	.	10.8	
27	10.3	11.7	.	10.7	
28	10.3	11.7	.	10.7	
29					
30					
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	240.3	285.7	.	238.4	
Daily Means	8.6	10.2	.	8.5	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL STOKES	CAMPBELL STOKES	CAMPBELL STOKES	CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: FEBRUARY		Year: 2019			Country: CHILE
Daily Totals					
Latitude	27°15'S	27°10' S	29°57' S	33°23' S	
Longitude	70°46'W	109°26' W	71°22' W	70°47' W	
Elevation	204 m	47 m	25 m	474 m	
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL	
Date					
1	11.0	7.6	6.6	12.9	
2	9.2	7.3	5.8	12.8	
3	5.0	8.6	3.2	12.7	
4	0.0	3.7	1.7	12.7	
5	4.0	6.0	4.8	12.7	
6	8.2	6.7	8.0	12.7	
7	9.1	8.6	6.5	12.7	
8	8.8	6.6	9.6	12.6	
9	9.8	6.4	8.5	12.6	
10	10.1	7.2	9.3	9.3	
11	4.8	4.3	9.7	5.5	
12	5.2	10.3	6.8	9.9	
13	8.7	5.8	12.1	12.2	
14	10.7	12.0	11.7	12.4	
15	9.5	7.3	2.4	12.5	
16	9.9	0.5	6.5	7.4	
17	10.1	5.9	12.1	12.2	
18	7.8	9.7	4.9	12.3	
19	8.8	0.0	4.8	12.3	
20	11.4	0.6	6.8	12.3	
21	11.5	5.9	12.0	12.3	
22	9.8	11.4	12.1	11.0	
23	3.0	3.6	9.9	12.1	
24	3.0	0.0	9.0	12.2	
25	4.7	9.1	7.3	12.1	
26	6.9	7.9	10.9	12.2	
27	9.9	5.4	9.4	12.1	
28	9.9	5.4	9.4	12.1	
29					
30					
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	220.8	173.8	221.8	328.8	
 Daily Means	7.9	6.2	7.9	11.7	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: FEBRUARY		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	33°27' S	33°37' S	33°39' S	34°58' S	
Longitude	70°42' W	78°50' W	71°36' W	71°12' W	
Elevation	520 m	30 m	74 m	225 m	
Station					
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	
1	11.3	7.3	11.0	13.0	
2	11.3	10.8	0.0	.	
3	11.3	11.1	1.9	12.4	
4	11.2	11.5	0.3	12.8	
5	11.1	10.6	0.0	12.7	
6	11.1	2.6	2.4	12.5	
7	11.1	7.1	4.8	8.9	
8	11.0	8.0	9.1	11.0	
9	11.1	5.5	9.4	12.3	
10	9.4	6.4	7.9	9.4	
11	5.4	10.1	10.9	6.1	
12	10.8	6.6	12.2	11.1	
13	11.0	9.3	12.4	11.9	
14	11.3	11.0	11.9	12.0	
15	11.1	9.4	5.6	11.5	
16	6.7	10.7	2.1	11.5	
17	10.6	5.7	6.3	6.0	
18	11.2	9.4	0.0	11.2	
19	10.5	11.1	0.2	12.0	
20	11.2	4.8	4.3	9.2	
21	10.3	3.9	3.8	4.9	
22	11.2	9.0	10.1	4.9	
23	11.1	8.4	11.6	9.1	
24	10.7	0.8	11.7	11.9	
25	10.7	3.8	11.6	11.8	
26	10.9	7.5	11.5	11.6	
27	10.8	10.1	5.9	11.7	
28	10.8	10.1	5.9	11.7	
29					
30					
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	296.2	222.6	184.8	.	
Daily Means	10.6	8.0	6.6	10.6	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL STOKES	CAMPBELL STOKES	CAMPBELL STOKES	CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: FEBRUARY		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	36°36' S	36°46' S	38°45' S	39°41' S	
Longitude	72°26' W	73°03' W	72°38' W	73°04' W	
Elevation	124 m	12 m	114 m	19 m	
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA	
Date					
1	.	12.4	.	12.6	
2	.	10.9	.	12.6	
3	.	1.9	.	12.4	
4	.	0.4	.	13.0	
5	.	7.9	.	10.4	
6	.	11.9	.	13.0	
7	.	10.4	.	10.8	
8	.	8.5	.	13.0	
9	.	12.2	.	12.0	
10	.	6.9	.	4.2	
11	.	12.1	.	11.8	
12	.	11.1	.	12.2	
13	.	12.1	.	12.1	
14	.	11.4	.	12.0	
15	.	8.7	.	11.7	
16	.	0.0	.	11.8	
17	.	6.7	.	11.3	
18	.	6.5	.	0.0	
19	.	6.4	.	10.5	
20	.	6.8	.	7.7	
21	.	0.0	.	3.4	
22	.	11.2	.	2.7	
23	.	12.2	.	10.0	
24	.	10.1	.	11.4	
25	.	12.1	.	11.7	
26	.	12.1	.	9.8	
27	.	12.0	.	8.7	
28	.	12.0	.	8.7	
29					
30					
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	246.9	.	281.5	
 Daily Means	.	8.8	.	10.1	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: FEBRUARY		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	41°26' S	45°35' S	53°08' S		
Longitude	73°07' W	72°07' W	70°58' W		
Elevation	81 m	310 m	37 m		
Station					
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS		
1	13.5	6.0	13.2		
2	12.5	11.4	4.5		
3	12.9	11.0	11.8		
4	13.0	11.2	13.7		
5	7.4	8.6	9.4		
6	12.0	10.3	0.5		
7	9.9	10.9	0.9		
8	11.6	7.9	5.3		
9	4.0	10.8	6.3		
10	7.1	11.0	9.7		
11	12.3	10.9	0.0		
12	12.5	11.5	3.3		
13	11.7	8.2	8.7		
14	8.6	8.0	9.5		
15	11.6	10.3	4.3		
16	12.2	11.1	6.7		
17	8.1	6.6	0.2		
18	1.0	10.1	8.5		
19	9.5	6.9	4.9		
20	0.0	8.1	0.0		
21	0.0	8.6	8.7		
22	8.1	10.2	3.4		
23	4.2	8.8	4.3		
24	6.8	5.7	5.6		
25	11.1	10.2	4.4		
26	6.2	9.1	12.3		
27	3.9	6.6	6.7		
28	3.9	6.6	6.7		
29					
30					
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	235.6	256.6	173.5		
 Daily Means	8.4	9.2	6.2		
Types of Instruments	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH		
	CAMPBELL	CAMPBELL	CAMPBELL		
	STOKES	STOKES	STOKES		

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MARCH	Year: 2019				Country: CHILE
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19' W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	10.2	11.7	.	10.7	
2	11.1	11.8	.	9.7	
3	11.1	11.6	.	9.7	
4	8.1	11.6	.	10.5	
5	11.0	11.6	.	10.3	
6	11.0	11.7	.	10.5	
7	10.8	11.6	.	7.1	
8	10.8	8.0	.	5.4	
9	10.6	11.6	.	11.1	
10	8.2	8.9	.	8.1	
11	7.4	5.1	.	6.1	
12	10.4	11.3	.	10.9	
13	5.3	0.0	.	10.4	
14	5.8	5.3	.	10.6	
15	6.0	9.4	.	7.7	
16	6.7	10.5	.	9.9	
17	10.7	11.5	.	10.9	
18	10.3	11.4	.	9.5	
19	8.6	11.2	.	10.6	
20	7.3	11.3	.	10.7	
21	10.5	11.4	.	10.4	
22	10.6	11.3	.	10.5	
23	10.3	11.3	.	9.6	
24	10.3	11.3	.	10.6	
25	10.0	11.0	.	10.3	
26	10.3	11.3	.	10.5	
27	9.8	10.7	.	10.5	
28	9.7	11.1	.	10.5	
29	10.5	10.6	.	6.3	
30	8.4	11.1	.	8.9	
31	8.4	11.1	.	8.9	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	290.2	319.3	.	297.4	
 Daily Means	9.4	10.3	.	9.6	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MARCH	Year: 2019				Country: CHILE
Daily Totals					
Latitude	27°15'S	27°10' S	29°57' S	33°23' S	
Longitude	70°46'W	109°26' W	71°22' W	70°47' W	
Elevation	204 m	47 m	25 m	474 m	
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL	
Date					
1	2.9	8.0	4.3	11.4	
2	4.8	6.9	4.5	11.9	
3	7.2	1.6	10.0	11.1	
4	7.2	10.6	6.5	10.6	
5	6.5	10.6	11.0	12.0	
6	5.0	11.2	9.8	11.9	
7	3.3	5.9	8.7	11.8	
8	0.0	8.1	5.7	11.7	
9	0.9	10.8	3.6	10.7	
10	7.8	11.0	11.1	11.6	
11	11.0	6.6	10.9	11.7	
12	10.0	8.8	6.4	11.7	
13	8.4	7.3	3.1	10.8	
14	8.1	8.8	2.7	11.6	
15	7.7	7.6	1.6	11.5	
16	3.4	6.3	0.0	14.6	
17	5.4	7.0	10.1	11.5	
18	0.0	9.5	9.2	9.4	
19	7.6	3.7	6.9	11.3	
20	6.0	10.9	9.1	10.8	
21	6.6	7.0	6.3	11.3	
22	6.3	8.1	5.9	11.5	
23	7.0	3.2	3.4	11.3	
24	7.1	11.0	3.4	11.3	
25	7.7	8.6	1.0	11.3	
26	7.3	9.4	0.0	11.3	
27	4.7	9.5	0.0	11.1	
28	7.5	9.5	2.0	8.4	
29	1.5	9.3	3.4	10.7	
30	0.2	10.6	0.8	2.9	
31	0.2	10.6	0.8	2.9	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	169.3	258.0	162.2	333.6	
 Daily Means	5.5	8.3	5.2	10.8	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MARCH		Year: 2019			Country: CHILE
Daily Totals					
Latitude	33°27' S	33°37' S	33°39' S	34°58' S	
Longitude	70°42' W	78°50' W	71°36' W	71°12' W	
Elevation	520 m	30 m	74 m	225 m	
Station	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	
Date					
1	10.8	3.4	11.7	11.1	
2	10.9	0.0	7.9	11.2	
3	10.2	4.9	6.3	5.7	
4	10.1	3.2	5.5	10.9	
5	10.6	5.3	10.9	11.4	
6	10.3	9.9	11.0	11.2	
7	10.3	5.6	5.6	8.2	
8	9.8	10.1	7.8	10.8	
9	9.7	7.6	7.7	10.3	
10	9.7	9.7	8.1	10.4	
11	9.7	4.8	10.7	10.6	
12	9.1	5.0	5.1	0.6	
13	8.2	3.6	2.8	7.9	
14	9.5	3.2	7.9	10.7	
15	9.4	2.1	9.0	10.7	
16	8.5	3.7	6.9	10.7	
17	8.8	7.3	6.6	10.6	
18	6.1	7.5	10.3	7.7	
19	9.3	7.3	10.9	8.5	
20	8.3	4.7	9.1	9.1	
21	9.0	4.3	10.1	10.0	
22	8.9	5.6	9.9	8.5	
23	8.6	8.3	6.9	7.3	
24	8.6	9.5	7.4	9.3	
25	8.7	1.1	0.0	10.1	
26	8.8	5.0	0.0	10.0	
27	8.7	1.7	0.0	8.2	
28	8.2	0.0	3.8	5.2	
29	8.6	0.0	3.7	6.9	
30	0.9	2.9	0.0	2.2	
31	0.9	2.9	0.0	2.2	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	269.2	150.2	203.6	268.2	
 Daily Means	8.7	4.8	6.6	8.7	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MARCH	Year: 2019				Country: CHILE
Daily Totals					
Latitude	36°36' S	36°46' S	38°45' S	39°41' S	
Longitude	72°26' W	73°03' W	72°38' W	73°04' W	
Elevation	124 m	12 m	114 m	19 m	
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA	
Date					
1	.	12.2	.	9.0	
2	.	9.7	.	7.8	
3	.	9.2	.	9.5	
4	.	10.4	.	8.4	
5	.	11.2	.	8.0	
6	.	9.4	.	0.0	
7	.	10.6	.	8.5	
8	.	10.8	.	11.2	
9	.	10.8	.	10.9	
10	.	7.4	.	.	
11	.	6.1	.	8.4	
12	.	9.8	.	6.1	
13	.	10.0	.	9.9	
14	.	11.4	.	10.9	
15	.	10.5	.	10.4	
16	.	8.8	.	11.3	
17	.	9.0	.	2.4	
18	.	10.2	.	6.5	
19	.	10.1	.	9.0	
20	.	9.1	.	8.7	
21	.	9.9	.	0.2	
22	.	9.7	.	2.6	
23	.	9.8	.	6.8	
24	.	9.8	.	9.3	
25	.	8.6	.	9.0	
26	.	7.1	.	10.1	
27	.	0.0	.	9.9	
28	.	4.3	.	9.9	
29	.	5.2	.	0.0	
30	.	8.6	.	0.0	
31	.	8.6	.	0.0	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	278.3	.	.	
 Daily Means	.	9.0	.	7.2	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MARCH		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	41°26' S	45°35' S	53°08' S		
Longitude	73°07' W	72°07' W	70°58' W		
Elevation	81 m	310 m	37 m		
Station					
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS		
1	3.5	7.0	0.7		
2	0.4	1.8	2.8		
3	1.6	6.1	9.7		
4	5.3	4.8	6.9		
5	0.0	2.2	10.2		
6	0.5	2.9	4.1		
7	6.4	10.0	7.4		
8	10.7	10.9	1.6		
9	10.7	9.8	2.7		
10	10.7	10.5	8.1		
11	7.5	5.3	8.4		
12	1.4	5.4	3.7		
13	1.6	5.5	0.0		
14	8.2	7.3	1.7		
15	9.0	8.2	0.0		
16	8.4	7.4	0.0		
17	5.1	7.1	0.0		
18	6.4	7.8	7.6		
19	8.5	9.2	0.0		
20	7.3	8.5	2.6		
21	0.0	6.5	0.4		
22	1.2	0.3	6.2		
23	3.3	7.9	7.8		
24	9.4	8.7	7.3		
25	6.2	6.6	8.4		
26	8.4	7.7	0.0		
27	9.8	8.9	0.7		
28	4.2	9.2	2.9		
29	0.1	2.1	6.8		
30	10.6	9.2	0.0		
31	10.6	9.2	0.0		
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	177.0	214.0	118.7		
 Daily Means	5.7	6.9	3.8		
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH		
Instruments	CAMPBELL STOKES	CAMPBELL STOKES	CAMPBELL STOKES		

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: APRIL	Year: 2019				Country: CHILE
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	3.4	7.9	.	8.3	
2	6.0	1.1	.	9.2	
3	5.6	9.2	.	8.9	
4	7.5	9.0	.	10.8	
5	10.6	11.1	.	9.8	
6	9.2	11.1	.	1.0	
7	9.5	11.1	.	10.6	
8	10.2	11.0	.	10.3	
9	5.5	11.0	.	7.8	
10	4.8	8.0	.	6.4	
11	10.5	11.0	.	10.2	
12	10.2	11.0	.	10.5	
13	10.5	10.9	.	10.4	
14	8.9	10.4	.	10.2	
15	10.4	10.8	.	9.8	
16	2.5	7.2	.	7.7	
17	6.2	8.5	.	7.2	
18	7.9	5.9	.	9.6	
19	6.0	7.4	.	9.9	
20	4.7	10.1	.	9.5	
21	9.6	10.7	.	10.4	
22	6.1	10.7	.	10.3	
23	8.3	10.7	.	10.1	
24	4.8	10.5	.	6.4	
25	8.4	10.4	.	9.2	
26	9.4	10.5	.	6.4	
27	4.4	10.6	.	1.0	
28	2.1	8.0	.	5.7	
29	4.9	7.6	.	7.5	
30	4.9	7.6	.	7.5	
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	213.0	281.0	.	252.6	
 Daily Means	7.1	9.4	.	8.4	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: APRIL		Year: 2019			Country: CHILE
Daily Totals					
Latitude	27°15'S	27°10' S	29°57' S	33°23' S	
Longitude	70°46'W	109°26' W	71°22' W	70°47' W	
Elevation	204 m	47 m	25 m	474 m	
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL	
Date					
1	3.2	4.9	6.8	10.9	
2	7.8	9.5	4.7	11.1	
3	6.8	6.5	3.5	10.9	
4	10.3	5.0	10.1	7.8	
5	9.6	4.5	8.5	10.9	
6	7.7	8.3	9.2	10.9	
7	4.8	9.7	0.0	10.9	
8	4.9	6.5	0.0	10.5	
9	1.8	8.9	0.0	5.7	
10	3.1	8.0	9.8	9.4	
11	2.6	8.9	2.9	10.8	
12	7.2	7.7	3.4	6.6	
13	6.6	6.3	5.4	0.0	
14	6.0	5.3	9.9	5.3	
15	7.7	4.5	9.5	10.5	
16	4.8	8.1	1.9	10.5	
17	5.0	3.8	0.0	11.2	
18	4.3	1.8	1.5	4.7	
19	5.7	9.2	0.0	5.6	
20	5.5	8.6	5.9	4.0	
21	3.2	4.0	10.3	9.8	
22	6.6	5.2	10.0	10.2	
23	4.4	7.7	8.8	4.0	
24	0.4	4.0	0.0	0.2	
25	9.8	6.7	8.6	6.7	
26	7.2	6.0	9.5	9.9	
27	9.6	4.5	7.7	10.1	
28	0.0	8.4	7.0	10.6	
29	0.0	4.8	0.0	6.7	
30	0.0	4.8	0.0	6.7	
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	156.6	192.1	154.9	243.1	
 Daily Means	5.2	6.4	5.2	8.1	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: APRIL		Year: 2019			Country: CHILE
Daily Totals					
Latitude	33°27' S	33°37' S	33°39' S	34°58' S	
Longitude	70°42' W	78°50' W	71°36' W	71°12' W	
Elevation	520 m	30 m	74 m	225 m	
Station	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	
Date					
1	8.4	5.3	7.9	6.5	
2	8.6	5.3	6.0	9.5	
3	8.6	8.2	0.0	9.4	
4	6.8	6.6	9.6	4.1	
5	8.4	8.6	9.7	9.6	
6	8.7	7.9	9.9	9.6	
7	8.8	6.2	6.8	9.8	
8	8.4	1.1	1.1	9.0	
9	4.9	6.1	0.0	0.0	
10	8.7	0.3	9.9	5.7	
11	8.5	0.1	0.0	8.5	
12	6.2	4.4	0.0	0.0	
13	0.0	5.1	0.0	3.6	
14	1.8	4.8	4.7	2.9	
15	8.4	9.2	9.0	.	
16	8.5	7.3	8.2	9.2	
17	8.1	0.3	8.5	8.9	
18	2.4	0.0	0.0	2.8	
19	4.5	6.3	0.4	0.0	
20	4.0	4.3	4.5	3.2	
21	7.7	1.2	7.9	5.6	
22	7.4	3.2	7.5	5.7	
23	4.4	3.0	0.0	3.5	
24	0.0	0.4	0.7	0.0	
25	6.0	0.0	7.8	5.3	
26	7.4	7.2	7.6	8.4	
27	7.4	0.8	7.7	7.4	
28	7.4	0.2	7.1	5.8	
29	5.2	5.6	5.6	2.4	
30	5.2	5.6	5.6	2.4	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	190.8	124.6	153.7	.	
Daily Means	6.4	4.2	5.1	5.5	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: APRIL	Year: 2019				Country: CHILE
Daily Totals					
Latitude	36°36' S	36°46' S	38°45' S	39°41' S	
Longitude	72°26' W	73°03' W	72°38' W	73°04' W	
Elevation	124 m	12 m	114 m	19 m	
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA	
Date					
1	.	8.0	.	2.2	
2	.	10.0	.	7.7	
3	.	3.6	.	1.7	
4	.	9.6	.	8.9	
5	.	10.6	.	10.2	
6	.	9.6	.	7.7	
7	.	9.7	.	5.9	
8	.	0.0	.	0.0	
9	.	1.9	.	0.0	
10	.	7.2	.	2.8	
11	.	6.8	.	4.1	
12	.	0.5	.	1.0	
13	.	6.1	.	2.3	
14	.	8.9	.	4.1	
15	.	9.2	.	5.3	
16	.	5.2	.	3.0	
17	.	6.1	.	3.0	
18	.	0.0	.	0.0	
19	.	0.0	.	6.7	
20	.	0.0	.	3.8	
21	.	0.0	.	6.0	
22	.	0.0	.	0.0	
23	.	0.0	.	7.8	
24	.	2.1	.	1.6	
25	.	7.9	.	0.3	
26	.	7.6	.	3.9	
27	.	3.9	.	0.0	
28	.	3.4	.	6.7	
29	.	8.9	.	4.8	
30	.	8.9	.	4.8	
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	155.7	.	116.3	
 Daily Means	.	5.2	.	3.9	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: APRIL	Year: 2019			Country: CHILE
Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	0.9	0.2	0.0	
2	4.4	7.7	4.1	
3	0.0	4.4	6.1	
4	6.3	6.7	6.2	
5	7.4	3.0	0.0	
6	1.0	5.7	7.6	
7	5.5	0.0	3.6	
8	1.4	5.9	0.0	
9	0.9	5.0	2.2	
10	0.0	7.5	3.1	
11	2.6	5.2	9.1	
12	0.0	0.6	0.6	
13	1.6	0.9	5.1	
14	4.9	5.5	3.8	
15	9.0	0.7	3.0	
16	1.2	1.0	4.7	
17	2.3	7.3	5.2	
18	5.5	4.7	0.0	
19	4.1	6.8	6.6	
20	0.0	5.3	8.5	
21	0.0	3.5	5.8	
22	0.0	5.1	1.4	
23	7.4	6.7	4.1	
24	7.4	6.0	7.9	
25	0.0	6.1	5.2	
26	2.4	2.3	7.3	
27	0.0	0.0	2.1	
28	2.5	2.0	2.1	
29	5.0	5.4	7.6	
30	5.0	5.4	7.6	
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	88.7	126.6	130.6	
 Daily Means	3.0	4.2	4.4	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MAY	Year: 2019				Country: CHILE
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19' W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	10.1	10.6	.	10.3	
2	10.1	10.5	.	10.0	
3	6.0	1.0	.	6.7	
4	9.9	9.1	.	8.9	
5	10.1	9.5	.	6.4	
6	9.5	9.3	.	7.4	
7	7.4	8.2	.	4.2	
8	0.0	3.5	.	0.0	
9	1.3	2.6	.	3.9	
10	0.0	0.1	.	0.0	
11	6.4	10.2	.	9.5	
12	6.7	10.2	.	9.6	
13	10.1	10.2	.	9.6	
14	9.9	9.7	.	6.0	
15	0.9	7.7	.	7.7	
16	5.0	6.5	.	0.0	
17	4.4	1.6	.	6.0	
18	3.8	6.0	.	9.4	
19	5.2	4.1	.	0.1	
20	3.0	6.2	.	7.0	
21	0.3	7.0	.	8.7	
22	4.9	7.2	.	6.2	
23	5.9	9.1	.	9.4	
24	3.7	4.0	.	8.5	
25	0.0	4.4	.	3.0	
26	4.3	7.1	.	7.1	
27	5.7	8.7	.	5.7	
28	6.0	11.1	.	9.2	
29	5.0	6.0	.	6.3	
30	7.4	8.5	.	8.9	
31	7.4	8.5	.	8.9	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	170.4	218.4	.	204.6	
 Daily Means	5.5	7.0	.	6.6	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MAY	Year: 2019				Country: CHILE
Daily Totals					
Latitude	27°15'S	27°10' S	29°57' S	33°23' S	
Longitude	70°46'W	109°26' W	71°22' W	70°47' W	
Elevation	204 m	47 m	25 m	474 m	
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL	
Date					
1	6.0	7.7	9.3	9.5	
2	5.0	0.8	0.0	4.4	
3	0.0	4.1	1.9	5.5	
4	3.9	8.3	4.9	8.7	
5	9.2	6.6	7.6	5.8	
6	1.9	6.7	0.0	3.1	
7	1.1	3.4	8.0	7.0	
8	0.0	7.5	0.0	3.2	
9	5.7	3.5	5.5	6.6	
10	0.8	7.9	5.3	9.5	
11	6.8	1.2	5.4	9.6	
12	9.3	2.8	9.8	9.6	
13	6.3	1.7	4.6	9.6	
14	9.4	2.1	4.0	9.6	
15	7.9	5.0	2.4	9.5	
16	4.2	7.6	7.5	3.3	
17	9.0	9.1	4.9	4.3	
18	0.1	1.9	9.2	9.5	
19	0.1	4.5	0.3	1.4	
20	2.6	0.1	1.5	5.1	
21	9.4	4.8	8.4	9.4	
22	9.5	7.0	9.6	9.4	
23	10.9	6.9	9.6	9.4	
24	0.0	4.6	4.7	0.9	
25	0.0	0.3	0.1	3.6	
26	2.3	5.9	5.1	1.2	
27	4.5	8.0	5.9	7.9	
28	8.1	8.9	2.9	7.3	
29	9.0	5.1	0.4	0.0	
30	9.4	8.3	5.6	5.0	
31	9.4	8.3	5.6	5.0	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	161.8	160.6	150.0	193.9	
 Daily Means	5.2	5.2	4.8	6.3	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MAY		Year: 2019			Country: CHILE
Daily Totals					
Latitude	33°27' S	33°37' S	33°39' S	34°58' S	
Longitude	70°42' W	78°50' W	71°36' W	71°12' W	
Elevation	520 m	30 m	74 m	225 m	
Station	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	
Date					
1	8.1	7.9	7.7	8.8	
2	2.2	4.7	3.0	0.0	
3	3.0	0.3	0.5	0.0	
4	6.1	5.6	0.0	0.0	
5	2.3	3.6	2.7	0.9	
6	1.8	0.2	1.6	.	
7	7.6	4.4	0.0	0.3	
8	0.0	4.3	0.0	0.0	
9	4.6	4.4	6.7	6.0	
10	7.3	5.5	7.5	5.1	
11	7.5	2.1	7.3	8.3	
12	7.9	3.0	6.8	2.5	
13	7.8	7.2	7.5	5.0	
14	7.7	7.6	1.6	6.9	
15	8.2	5.6	0.0	9.0	
16	3.2	0.9	1.1	0.4	
17	2.8	5.7	0.0	1.0	
18	7.6	5.0	7.1	4.0	
19	0.0	5.9	0.2	3.9	
20	4.4	4.3	6.5	3.3	
21	7.6	6.2	5.4	3.4	
22	7.5	7.3	7.0	8.3	
23	8.0	0.5	7.1	8.3	
24	0.5	0.7	1.5	0.5	
25	2.2	0.9	1.5	1.0	
26	0.9	4.7	1.6	1.9	
27	6.2	6.3	4.3	4.3	
28	5.5	0.0	4.4	6.8	
29	0.0	3.9	0.0	0.0	
30	3.4	5.6	2.4	0.1	
31	3.4	5.6	2.4	0.1	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	145.3	129.9	105.4	.	
Daily Means	4.7	4.2	3.4	3.3	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MAY	Year: 2019				Country: CHILE
Daily Totals					
Latitude	36°36' S	36°46' S	38°45' S	39°41' S	
Longitude	72°26' W	73°03' W	72°38' W	73°04' W	
Elevation	124 m	12 m	114 m	19 m	
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA	
Date					
1	.	2.5	.	0.0	
2	.	0.0	.	0.0	
3	.	0.0	.	0.2	
4	.	1.8	.	0.5	
5	.	7.2	.	2.5	
6	.	2.0	.	0.0	
7	.	0.0	.	4.4	
8	.	3.9	.	0.0	
9	.	2.2	.	0.1	
10	.	8.9	.	2.7	
11	.	3.2	.	0.0	
12	.	5.4	.	4.0	
13	.	8.9	.	7.4	
14	.	8.2	.	4.3	
15	.	1.2	.	0.2	
16	.	0.4	.	0.0	
17	.	4.6	.	1.8	
18	.	7.7	.	0.6	
19	.	6.3	.	3.3	
20	.	7.2	.	8.7	
21	.	8.0	.	0.0	
22	.	8.4	.	0.3	
23	.	7.0	.	0.0	
24	.	1.0	.	3.8	
25	.	0.5	.	0.0	
26	.	0.1	.	0.8	
27	.	0.8	.	4.4	
28	.	5.1	.	1.1	
29	.	0.0	.	0.0	
30	.	1.2	.	0.4	
31	.	1.2	.	0.4	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	114.9	.	51.9	
 Daily Means	.	3.7	.	1.7	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: MAY	Year: 2019			Country: CHILE
Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	0.0	0.0	5.6	
2	0.8	2.5	8.4	
3	1.5	5.4	8.3	
4	3.5	2.6	4.0	
5	1.7	6.1	4.4	
6	4.3	6.3	0.0	
7	4.1	6.0	6.4	
8	0.1	0.4	5.2	
9	0.1	2.4	7.4	
10	1.7	2.4	1.4	
11	0.0	3.7	0.0	
12	2.3	0.4	4.0	
13	4.2	4.9	6.7	
14	5.2	0.7	5.3	
15	1.8	0.0	1.5	
16	0.0	0.0	0.4	
17	1.6	0.0	0.0	
18	0.9	2.0	2.9	
19	3.2	1.6	5.3	
20	6.5	3.9	4.4	
21	3.5	0.6	0.0	
22	0.0	0.0	0.0	
23	0.0	0.2	0.0	
24	0.0	0.2	6.4	
25	0.9	2.1	6.8	
26	1.1	1.0	2.6	
27	3.2	0.3	4.5	
28	5.2	3.8	4.3	
29	0.0	0.7	4.4	
30	0.7	0.0	6.0	
31	0.7	0.0	6.0	
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	58.8	60.2	122.6	
 Daily Means	1.9	1.9	4.0	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JUNE	Year: 2019				Country: CHILE
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19' W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	4.7	9.9	.	5.1	
2	4.6	10.0	.	6.6	
3	5.6	4.9	.	8.5	
4	5.4	0.0	.	4.9	
5	5.1	5.0	.	4.9	
6	0.0	0.7	.	4.8	
7	3.8	3.1	.	3.9	
8	7.0	8.5	.	7.9	
9	9.9	9.8	.	6.7	
10	6.4	9.8	.	8.1	
11	5.9	6.9	.	6.4	
12	0.0	7.9	.	5.0	
13	1.0	6.6	.	5.0	
14	0.0	0.0	.	2.1	
15	0.0	0.9	.	6.4	
16	1.4	1.6	.	9.2	
17	3.9	8.6	.	9.3	
18	5.4	9.9	.	9.0	
19	3.3	3.3	.	7.6	
20	8.7	3.8	.	0.5	
21	5.9	10.1	.	8.1	
22	0.0	0.0	.	0.0	
23	1.8	7.7	.	4.5	
24	6.9	1.8	.	5.4	
25	5.4	6.7	.	7.0	
26	7.1	9.9	.	6.6	
27	7.4	9.3	.	0.4	
28	5.7	5.8	.	6.3	
29	0.5	10.0	.	9.1	
30	0.5	10.0	.	9.1	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	123.3	182.5	.	178.4	
Daily Means	4.1	6.1	.	5.9	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JUNE		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	27°15'S	27°10' S	29°57' S	33°23' S	
Longitude	70°46'W	109°26' W	71°22' W	70°47' W	
Elevation	204 m	47 m	25 m	474 m	
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL	
Date					
1	9.2	6.4	9.4	3.2	
2	9.2	6.7	9.5	8.2	
3	8.6	5.5	.	8.5	
4	.	0.3	4.1	2.6	
5	5.5	8.2	5.3	7.8	
6	6.6	9.2	8.8	3.9	
7	6.2	5.8	8.5	9.2	
8	4.0	4.8	8.6	9.2	
9	4.0	3.9	1.5	9.2	
10	7.9	0.0	6.4	5.4	
11	0.0	0.3	0.0	4.2	
12	6.7	7.2	7.5	5.7	
13	9.0	5.9	7.4	0.0	
14	8.9	0.0	8.9	4.0	
15	9.2	0.0	8.7	8.1	
16	9.2	1.4	9.2	9.1	
17	9.1	7.9	3.9	2.3	
18	9.2	6.0	9.4	9.1	
19	8.9	7.1	8.9	6.5	
20	3.0	6.7	3.3	7.3	
21	2.5	7.7	7.0	5.7	
22	2.5	7.4	9.0	8.4	
23	6.9	3.2	8.9	1.6	
24	1.1	6.4	0.0	0.0	
25	5.2	6.2	8.6	7.2	
26	8.6	6.4	9.0	1.7	
27	0.8	5.6	6.2	1.3	
28	0.0	5.2	0.0	0.0	
29	0.0	7.6	9.0	0.6	
30	0.0	7.6	9.0	0.6	
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	156.6	.	150.6	
 Daily Means	5.6	5.2	6.8	5.0	
Types of Instruments	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JUNE		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	33°27' S	33°37' S	33°39' S	34°58' S	
Longitude	70°42' W	78°50' W	71°36' W	71°12' W	
Elevation	520 m	30 m	74 m	225 m	
Station					
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	
1	1.1	2.4	3.0	0.0	
2	5.0	1.7	6.2	6.9	
3	4.9	0.0	4.3	3.2	
4	1.2	1.2	1.6	0.5	
5	3.7	4.1	0.5	0.0	
6	2.8	5.3	4.3	3.9	
7	7.0	3.9	6.7	5.7	
8	7.6	2.1	6.2	4.5	
9	7.2	2.3	6.3	2.9	
10	3.8	0.0	5.5	2.5	
11	4.3	0.9	1.0	0.0	
12	2.3	4.4	0.5	0.0	
13	0.0	6.3	0.8	3.1	
14	3.6	2.4	1.4	0.6	
15	6.0	4.0	6.1	6.1	
16	6.1	5.4	5.8	3.0	
17	0.0	3.7	0.0	4.3	
18	6.6	6.9	6.6	7.9	
19	3.2	4.9	4.0	5.0	
20	2.3	0.0	0.0	3.6	
21	4.3	6.8	.	4.8	
22	5.8	0.9	.	5.7	
23	0.6	3.7	.	0.7	
24	0.0	4.9	0.0	0.0	
25	5.8	3.1	5.6	6.2	
26	0.9	3.2	0.8	0.0	
27	0.0	1.5	0.0	0.0	
28	0.0	2.1	0.0	2.6	
29	0.4	3.3	0.0	0.8	
30	0.4	3.3	0.0	0.8	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	96.9	94.7	.	85.3	
Daily Means	3.2	3.2	2.9	2.8	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JUNE		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	36°36' S	36°46' S	38°45' S	39°41' S	
Longitude	72°26' W	73°03' W	72°38' W	73°04' W	
Elevation	124 m	12 m	114 m	19 m	
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA	
Date					
1	.	0.1	.	0.6	
2	.	1.8	.	5.4	
3	.	0.1	.	0.0	
4	.	0.0	.	0.0	
5	.	0.0	.	1.9	
6	.	6.1	.	5.6	
7	.	7.9	.	0.0	
8	.	0.2	.	1.5	
9	.	2.6	.	0.0	
10	.	0.5	.	1.9	
11	.	1.0	.	0.0	
12	.	0.0	.	0.0	
13	.	1.0	.	0.0	
14	.	0.0	.	4.5	
15	.	2.1	.	5.4	
16	.	6.5	.	5.6	
17	.	6.9	.	4.5	
18	.	7.7	.	1.0	
19	.	7.0	.	.	
20	.	0.0	.	1.0	
21	.	1.5	.	0.0	
22	.	7.1	.	0.0	
23	.	4.5	.	2.5	
24	.	5.7	.	5.3	
25	.	2.1	.	0.2	
26	.	2.1	.	0.0	
27	.	0.0	.	2.0	
28	.	0.0	.	2.0	
29	.	4.2	.	8.2	
30	.	4.2	.	8.2	
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	82.9	.	.	
 Daily Means	.	2.8	.	2.3	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JUNE		Year: 2019		Country: CHILE	
Daily Totals					
Latitude	41°26' S	45°35' S	53°08' S		
Longitude	73°07' W	72°07' W	70°58' W		
Elevation	81 m	310 m	37 m		
Station					
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS		
1	1.3	0.0	0.0		
2	3.3	3.4	0.0		
3	0.0	1.3	2.6		
4	0.0	1.3	0.1		
5	0.0	0.9	5.1		
6	2.1	2.5	2.7		
7	0.0	1.2	2.7		
8	0.0	0.0	0.0		
9	0.0	0.0	0.2		
10	5.2	3.3	0.8		
11	5.0	1.5	2.6		
12	0.0	0.8	0.0		
13	2.4	0.0	1.1		
14	2.5	0.0	0.9		
15	4.9	0.0	0.4		
16	2.1	0.0	0.0		
17	5.2	0.0	0.0		
18	0.2	1.5	0.6		
19	2.3	0.6	3.4		
20	2.6	1.0	1.1		
21	2.8	0.0	0.9		
22	0.0	1.5	5.5		
23	1.7	2.5	0.0		
24	3.6	3.2	0.7		
25	0.0	0.1	2.6		
26	3.8	0.0	6.0		
27	0.0	2.3	6.1		
28	5.5	1.1	2.6		
29	3.2	0.7	3.8		
30	3.2	0.7	3.8		
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	62.9	31.4	56.3		
 Daily Means	2.1	1.0	1.9		
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES		